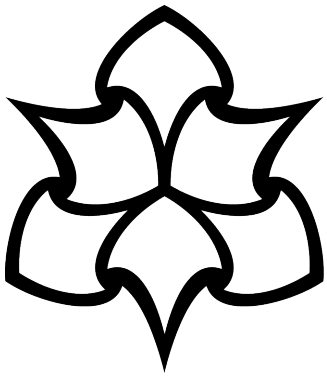

Chapter 26

Maturing on a high: an analysis of trends, prevalence and patterns of recreational drug use in middle and older adulthood

Lisa Williams and Rebecca Askew

Abstract

Lately, we have witnessed how recreational drug use is extending further into adulthood than has traditionally been the case. Some young adults appear to be taking their recreational drug use with them into middle and older adulthood and in other cases drug use is initiated in later life. Analysing survey data from America, Australia, and England and Wales this chapter summarizes the extent of and trends in adult recreational drug use. In doing so, it is argued that many adults are drug experienced and a substantial minority are continuing to take drugs as they grow older. The trend in recent drug use for many adults aged 30 and over is upward. The chapter considers some explanations for these findings drawing on the concept of a cohort replacement effect, critiquing the notion of maturing out from drug use and, in turn, appreciating the nature and functions of recreational drug use in adulthood. The authors argue that the experiences of adult recreational drug users are under-researched and suggest future research agendas and ways to access adult populations. The chapter concludes with a discussion of public health and human rights concerns.

Key words

adult recreational drug use, drug prevalence, drug patterns, drug trends, cohort replacement effect, transitions to adulthood.

Author biographies

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Introduction

Recreational drug use is commonly perceived as a youthful activity that decreases as age increases. The direction of trends in drug taking in many western countries also show a general decline over time over the past couple of decades. However, as we outline in this chapter, in spite of these overall reductions in use, in recent decades, drug use is extending further into adulthood at higher rates of prevalence than has traditionally been the case. The Crime Survey for England and Wales (CSEW) (Home Office, 2013) reported recent drug use had increased for all adults aged 35 and over, whilst simultaneously decreasing for all adults aged under 35. Inspired by this emerging trend, what follows is an analysis of prevalence, patterns and trends of recreational drug use from around the end of early adulthood into middle and older adulthood. For our purposes, we define early adulthood as age 18 to 29,

middle adulthood as age 30 to 49 and older adulthood as age 50 onwards. We analyse survey data from the United States, Australia, and England and Wales. Although we make comparisons between these three countries, our aim is to demonstrate the potential extent of adult recreational drug taking and direction of trends, rather than compare each country in a league table fashion. There are lessons to learn for other countries that have similar prevalence rates, patterns and trends in recreational drug use which we describe here, or may in the future. Our analysis does not include alcohol. Whilst we recognise that its consumption maybe widespread in adulthood, and it can act as a replacement or substitute for illegal drugs, particularly for former drug takers, here our focus is upon analysing and explaining the current developing trend we identified from the CSEW in respect of illegal drugs.

The chapter begins by outlining the extent, patterns and trends in recreational drug use in adulthood. We then go on to offer some explanations for these. In doing so, we demonstrate how a cohort replacement effect helps us to understand current prevalence and recent trends, we contemplate the utility of the notion of maturing out and the impact of transitions to adulthood to explain why recreational drug use decreases with age, and we also consider the functions and nature of recreational drug taking to explain why it persists into middle and older adulthood. We follow this with a discussion of the research and policy implications of what we have summarized and end the chapter with some concluding thoughts.

A generational shift in recreational drug use? Prevalence, patterns and trends in adult recreational drug use

Data sources and the limitations of using quantitative data to analyse adult recreational drug use

We begin with a brief description of the data sources we use to establish the extent and patterns of recreational drug use towards the end of early adulthood into middle and older adulthood, and trends. We analyse, at the time of writing, the latest published data from three established household trend studies: the Crime Survey for England and Wales (CSEW)[i]; the American National Survey on Drug Use and Health (NSDUH); and the Australian National Drug Strategy Household Survey (NDSHS). In addition, we draw on data from the longstanding cohort panel study, the American Monitoring the Future (MTF) study, which has followed a subsample of its panel from adolescence through to leaving college and into older adulthood.[ii] All data samples use large representative samples, have collected data on a range of illicit drugs[iii] for at least 18 years, and in most cases much longer, and track drug use from adolescence through to older adulthood.[iv] We have chosen these three countries because they are relatively similar culturally, they have some of the highest rates of drug prevalence in the western world (UNODC, 2013) and, in recent times, they have experienced periods which have been described as the 'normalization of recreational drug use' (see Aldridge et al., 2011; Parker et al., 1998) or a 'drug epidemic' (see Johnston et al., 2013).[v] There are several problems with relying upon ongoing surveys to measure and estimate drug use that we do not have the space to fully detail here; however, it is likely, for various reasons, such as problems with respondent recall and social desirability effects, that these surveys under-estimate drug taking. Furthermore, our piecing together of this jigsaw of prevalence, patterns and trends from these data sources is complicated by differences in published data. For example, the Australian NDSHS and the American MTF study publish recent drug use data measured using both annual and monthly indicators, whereas the CSEW and the American NSDUH only publish results for past year or past month prevalence,

respectively. Additionally, there are variations in the detail of data reported for each survey whereby some provide data analysed by distinct small age categories and others use more broad age ranges for specific variables. For these reasons we do not always systematically report the results from all of the surveys. Finally, in relation to trend data, it is useful to report levels of statistical significance to ascertain whether the results represent real changes over time or arise from changes in methodology. Unfortunately, the different data sources do not always report these, so we include them where they are available.

Recreational drug use in middle and older adulthood: Prevalence, patterns and trends

Our analysis, which follows, reveals how recreational drug use extends into middle and older adulthood; how, for some, rates of recent consumption are not decreasing with age, instead they are stabilising in middle and older adulthood; and how recreational drug use now extends into middle and older adulthood at prevalence rates which exceed those previously recorded.

The degree of recreational drug experience in adulthood

To illustrate the first finding and to assess the extent of drug experience amongst adults, we examine lifetime rates of drug use (having 'ever' taken a drug), for the consumption of any illicit drug.[vi] The surveys reveal that a significant proportion of adults are drug experienced. Here, we focus on the data from the 2012 American MTF study and the Australian 2010 NDSHS which, unlike the other surveys, provide a detailed breakdown of lifetime prevalence for the consumption of at least one drug by age. Primarily, we note the situation in America is somewhat unique because it currently has the highest lifetime prevalence across all age groups in adulthood, compared to the data from England and Wales and Australia.[vii] Examining lifetime prevalence of drug use for at least one drug by age reveals how it differs

across age groups. Focusing on the period towards the end of early adulthood, the 2012 MTF study (Johnston et al., 2013) demonstrates that as respondents reach age 30, lifetime prevalence for any drug stands at 65 per cent.[viii] It remains around this figure for adults with a modal age of 35 or 40, and then increases to 73 per cent for adults aged 45, and, again, to 79 per cent for those aged 50. The long-term trends in lifetime prevalence indicate that for many adults aged over 30, rates have been in decline. For example, lifetime prevalence for adults with a modal age of 45 was higher ten years ago (82 per cent), than it is today (73 per cent). These data clearly reveal how current older adults in America are more likely to have tried drugs than younger adults, and older lifetime drug abstainers are in a minority.

Turning to the data from Australia, the pattern of lifetime prevalence for any drug presents a slightly different picture. The age groups with the highest rates of lifetime prevalence are 20-29 year olds (51.3 per cent) and 30-39 year olds (59.3 per cent). Lifetime prevalence for the 40+ age category is lower at 32.6 per cent. Taking a long view, the NDSHS (Adhikari and Summerill, 2000; AIHW, 2002, 2005, 2008, 2011) data also records a downward trend in lifetime prevalence for any drug across adult age groups. Lifetime rates for adults aged between 20 and 29, and 30 and 39, peaked in 1998 at 67.5 per cent and 61.3 per cent respectively, and they have been in decline ever since. However, lifetime prevalence for adults aged 40 and over is currently at an historical high (32.6 per cent) compared to when it last peaked in 1998 at 30.2 per cent. The evidence presented here indicates that many adults, including middle and older adults, are drug experienced.

Regular recreational drug use in middle and older adulthood: prevalence and changing trends

Lifetime rates of drug use are a useful measure to identify the extent of drug experience, yet they distort the picture of drug taking because they include one-off triers who may briefly

experiment with drugs, but never become regular users. It is particularly important, given some of the high lifetime rates of drug use outlined above, that we are able to distinguish the level of and trends in current drug use[ix] in these surveys and assess how far regular drug consumption extends from the end of early adulthood into middle and older adulthood. Evidence from all three countries indicates how, in general, the prevalence of recent drug use for the consumption of at least one drug decreases as age increases (see Table 1).[x] On the one hand, this common trend confirms that for many, drug use is a youthful activity; however, on the other hand, a substantial minority are continuing to take drugs into middle and older adulthood. As an illustration of the potential extent of recent drug use in older adulthood, the American NSDUH 2012 estimates that 7 million adults aged 50 and over have taken a drug in the past year (SAMHSA, 2012).

[insert Table 1 around here]

There is also evidence to support our earlier contention that rates of recent drug use are not decreasing with age, instead, for some, they are stabilising in middle and older adulthood. This pattern is discernable in the American data sources (see Table 1). The 2012 NSDUH (SAMHSA, 2012) reveals a plateau effect in past month prevalence for at least one drug for adults aged between 40 and 54. Rather than reducing incrementally with each consecutive age group, past month rates of drug taking have stabilized around 7 per cent. Furthermore, they do not drop significantly in the next age band, 55-59. Thereafter, past month prevalence almost halves at 3.6 per cent for 60-64 year olds and substantially lowers to 1.3 per cent for 65 year olds and over. The greatest percentage reduction in past month prevalence occurs between the age groups 30-34 and 35-39 when it decreases by 4.4 per cent. The 2012 MTF data also shows a similar pattern of recent drug use, for at least one drug, initially decreasing

with age and a plateau effect between the ages of 40 and 50 (Johnston et al., 2013). These data clearly demonstrate that drug use extends into middle and older adulthood and, the evidence presented from the US illustrates how it does not always decrease in a steady fashion with age.

[insert Table 2 around here]

Whilst it is apparent then that many adults are drug experienced and some of these are continuing to take drugs in middle and older adulthood, one of the most striking emerging trends we found in recent drug use in all three countries is that it is rising annually for middle to older adults (see Table 2). More and more middle and older adults are continuing to take drugs. In the short-term the proportions are gradually increasing on a yearly basis and in the long-term prevalence of recent drug use for some adult age groups has escalated substantially. To illustrate, since 2011/12, the CSEW has revealed increases in past year prevalence for any drug for all adults aged 35 and over, whilst in 2012/13, all age groups under 35 reported decreases in past year use (Home Office, 2013). Likewise, a similar trend for middle and older adults is surfacing in the Australian NDSHS data, with increases in past year prevalence for any illicit drug for all adults aged 30 and over in the last two surveys in 2007 and 2010 (AIHW, 2011). These rises are statistically significant ($p < 0.05$) for adults aged 30 to 39 and 50 to 59. A consecutive annual increase was also present in the 2012 MTF data for adults aged 40 and over (Johnston et al. 2013). Data from the American NSDUH (SAMHSA, 2012) exhibits this general trend too, with a consecutive annual increase in rates of past month drug use for any illicit drug since 2011 for all age groups 30 and over. This increase is statistically significant ($p < 0.05$) for adults aged 30 to 34.

A longer view displays similar upward trends for some adult age groups, such that rates of recent drug use have climbed considerably. From 2002, the American NSDUH (SAMHSA, 2012) reveals how the rate of recent drug use increased for adults aged between 50 and 59. Past month prevalence for adults aged 50 to 54 more than doubled from 3.4 per cent in 2002 to 7.2 per cent in 2012 and tripled, during the same period, for adults aged 55 to 59, from 1.9 per cent in 2002 to 6.6 per cent in 2012.[xi] Analyzing data from the CSEW, the prevalence of recent drug use for any illicit drug for adults aged 45-54 and 55-59 in England and Wales rose by 1.6 per cent and 1.3 per cent respectively since 1996 (Home Office, 2013). These increases are statistically significant ($p < 0.05$). Similarly, the Australian NDSHS data indicates increases in recent drug taking for any illicit drug for all adults aged 40 and over since 1995 (AIHW, 2011). Although younger cohorts may still have higher rates of past year or month prevalence than their older counterparts, this trend data on the whole indicates that recent drug use by older adults is generally increasing yearly, and for some age groups, in the countries we examined, it is greater than periods when recent drug use for many adults had reached an historical high. There are three important conclusions we can draw from the data on recent drug use: (1) some adults are taking their drug use with them into middle and older adulthood; (2) for some their recent drug use is not incrementally decreasing with age, as we might expect, rather, rates are remaining stable for some years in middle and older adulthood, and (3) for some it is extending further into adulthood at a higher rate than has traditionally been the case.

Patterns of and trends in recreational drug use in middle and older adulthood

[insert Table 3 around here]

We now turn to expand our analysis by focusing on the most common drugs consumed in adulthood. Here, in respect of individual drugs, we highlight the levels of recent drug use and how the short and long-term trends we have identified for the consumption of at least one drug play out. We present and analyse data (see Table 3) from the CSEW 2012/13 (Home Office, 2013), the Australian NDSHS 2010 (AIHW, 2011) and the American 2012 MTF study (Johnston et al., 2013).[xii] All three surveys observe how the patterns of consumption we describe here emerge, for many adults, during their twenties.[xiii] They also demonstrate how different drugs comprise adult drug-taking repertoires across the three countries. In addition, further evidence is provided for how drug use generally declines with age and we can again observe how rates of drug use do not always decrease in a regular manner and may plateau in middle and older adulthood.

In all three countries cannabis is the most common drug used in the past year by adults. The next most common drugs consumed in the past year, in England and Wales, and Australia, are stimulant type drugs: cocaine and ecstasy, which have notably lower rates than cannabis. In England and Wales, cocaine is more prevalent than ecstasy as a past year drug, whilst in Australia, this pattern is reversed. So far, the most popular drugs we have identified in the three countries are those associated with recreational drug taking. However, in America, the non-medical use of pharmaceuticals is, when the frequency for both tranquilizers and sedatives within this category are combined, more prevalent than the past year use of cocaine. This form of consumption does not neatly fit definitions of recreational drug use, especially when it is frequent and involves substantial quantities. In these circumstances it may be labelled as drug misuse or abuse. The data presented demonstrates how different drugs form part of adult drug-taking repertoires in their twenties, thirties, forties and fifties across the three countries. These variations in patterns of drug consumption reflect different usage patterns and consumption preferences in the three countries examined.

Earlier we highlighted how, in England and Wales, and Australia, recent drug use is on the increase for adults in their thirties and beyond, and in America for adults aged 40 and over. We now outline how these emerging trends appear in relation to the most common drugs consumed in adulthood. Beginning with cannabis, in England and Wales (see Home Office, 2013), there have been recent consecutive annual increases in past year use for all adults aged 35 and over. The largest percentage increase occurred in the 35-44 age group, from 3.7 per cent in 2011/12 to 4.4 per cent in 2012/13, followed by the 45-54 age group, from 2.0 per cent in 2011/12 to 2.6 per cent in 2012/13. A long-term perspective demonstrates how past year prevalence for cannabis for 35-44 year olds is at a similar figure to that recorded in 1996,[xiv] yet, since then, it has almost doubled for 45-54 year olds and more than tripled for 55-59 year olds. Both these increases are statistically significant ($p < 0.05$) and current past year prevalence for 55-59 year olds has peaked. Similarly, these upward trends in respect of cannabis are evident in Australia (see AIHW, 2012), with a statistically significant ($p < 0.05$) increase in past year consumption for adults aged 50 to 59 from 3.8 per cent in 2007 to 5.5% in 2010. Nevertheless, the largest consecutive annual increase in recent use occurred in the 30-39 age group. Long-term trends reveal how recent cannabis consumption peaked for all adult age groups in 1998, however, current prevalence for adults aged 50-59 is close to when it peaked at 6.3 per cent. Turning to America (see Johnston et al., 2013), the recent trends in cannabis consumption confirm the upward trends we identified earlier for any drug for adults aged 40 and over. The largest percentage consecutive annual increases occurred amongst adults with a modal age of 40, from 10.6% in 2011 to 12.5% in 2012, and 50, from 10.8% in 2011 to 12.6% in 2012. Since data was first collected from adults with a modal age of 50, the recent consumption of cannabis has now reached an historical high.

The short-term trend for cocaine in England and Wales is identical to that for cannabis with the greatest percentage increase in annual prevalence occurring in the 35-44 age group, from

1.3 per cent in 2011/12 to 1.6 per cent in 2012/13. In the long-term, since 1996, there have been statistically significant ($p < 0.05$) increases in the recent consumption of cocaine for all adults aged between 30 and 54. The largest increase has occurred in the 35-44 age group from 0.2 per cent in 1996 to 1.6 per cent in 2011/12. This represents a substantial rise by a factor of eight with current rates being the highest they have ever been since data was first collected. In Australia, cocaine presents a slightly different situation with increases in past year prevalence from 2007 to 2010 across all adult age groups. Long-term trends reveal how past year prevalence has increased the most, since 1995, by a multiple of four, amongst adults aged 30-39. Recent trends in America show consecutive annual increases in cocaine consumption in middle adulthood. In particular, small rises have occurred amongst adults with a modal age of 40 (from 1.3 per cent in 2011 to 1.5 per cent in 2012) and 50 (from 1.6 per cent in 2011 to 1.8 per cent in 2012). However, current past year prevalence has not yet reached previous peaks for these age groups.

In England and Wales, the short-term trends for ecstasy show a mixed pattern across adult age groups, yet when we examine the long-term trends since 1996, overall past year prevalence has either doubled or tripled for adults aged 30-54. These increases are statistically significant ($p < 0.05$) for adults aged 35-44 and current prevalence is close to when it peaked in 2003/04 at 0.8 per cent. In Australia, short-term trends in respect of ecstasy indicate reductions in past year prevalence across all adult age groups. It peaked in 2007 at 4.7 per cent (now 3.9 per cent) for adults aged 30 to 39 and at 0.6 per cent (now 0.5 per cent) for adults aged 40 and over. Short-term trends for sedatives and tranquilizers, the second most common drugs consumed in the past year by adults in America, have been upward in middle adulthood. There have been annual consecutive increases for adults with a modal age of 40 or 45 for sedatives; and 40, 45 and 50 for tranquilizers. Current rates of consumption for sedatives for these adults are lower than when they previously peaked, however, the use

of tranquilizers has reached a peak for adults with a modal age of 45 (4.6 per cent) and 50 (4.3 per cent).

These data illustrate how the upward trends in recent drug use outlined earlier in the chapter are present for cannabis, the most common drug used in the three countries examined. Recent consumption of cannabis is increasing for adults aged 30 and over in Australia, 35 and over in England and Wales, and 40 and over in America. Notably, current prevalence has reached a peak for adults aged 55-59 in England and Wales and adults with a modal age of 50 in America. Recent cocaine consumption is also increasing for adults aged 35 and over in England and Wales, and current prevalence has peaked for adults aged 35-44. Upward trends for cocaine are also present in the Australian and American data. Trends in relation to ecstasy are more mixed across the countries with increases occurring across many adult age groups. However, in England and Wales, the long-term trend reveals how recent ecstasy consumption has increased substantially amongst those in middle and older adulthood and is near to an historical high for adults aged 35-44. The data from Australia shows a similar trend with current prevalence close to peak levels recorded in 2007. Similarly, the recent trends in the non-medical use of pharmaceuticals in America are mixed with increases across different age groups in adulthood, however, the long-term trend for tranquilizers has now peaked for adults with a modal age of 45 or 50. Again, these different short and long-term trends in all of the countries examined reflect drug consumption practices within each country. Increases and decreases in prevalence for individual drugs is, therefore, dependent upon the usage patterns in each country.

So far, we have outlined how adults in the three countries we have examined are drug experienced. Lifetime prevalence data and trends suggest that older cohorts are currently more drug experienced than their younger counterparts. The data on recent drug use indicates that for many adults in middle and older adulthood, rates of recent drug use are rising. Whilst

drug taking does generally decline with age, a minority are continuing to take drugs into middle and older adulthood, typically cannabis, followed by stimulant type drugs or the non-medical use of pharmaceuticals. We cannot, therefore, always assume recent drug use will decrease incrementally as age increases and there is evidence for how it can plateau in middle and older adulthood. These findings have implications for how we define recreational drug use as a youthful activity. Consequently, drugs researchers need to develop a detailed understanding of the persistence of drug use in middle and older adulthood. In the following section, we begin this task by offering some explanations for our findings.

Explaining adult recreational drug use: the cohort replacement effect, the journey to adulthood, and the functions and nature of recreational drug use

In this part of the chapter, we consider how a cohort replacement effect operates to help us understand the prevalence and trends in lifetime and recent drug use summarized above. In this regard, we draw on the concept of the normalization of recreational drug use (see Aldridge et al., 2011; Parker et al., 1998; 2002). In addition, we outline how social or environmental influences experienced during the journey to adulthood impact upon recreational drug journeys over time. Here, we reflect on how and why recreational drug use, for some, decreases with age, and, for others, persists into middle and older adulthood. In addition, to develop our explanations, we contemplate the functions and nature of recreational drug taking. These explanations are by no means exhaustive and individually they can only offer a partial account for what we have observed. However, we assert that collectively, they provide a more comprehensive understanding of prevalence and trends in adult recreational drug use.

The cohort replacement effect

The evidence we presented from the American 2012 MTF study (Johnston et al., 2013) uncovered adults in their forties and fifties with high rates of lifetime prevalence in respect of the trying of at least one drug, such that current lifetime abstainers at this age are in a minority, and lifetime prevalence is greater than amongst younger age groups. In contrast, data from the Australian 2010 NDSHS illustrated how lifetime prevalence rates for at least one drug were highest, between 50 and 60 per cent, for adults aged 20 to 40, and lowest for adults from age 40 onwards. The long-term trends in lifetime prevalence data from both countries also revealed two further different situations. In America, the trend in lifetime prevalence for most age groups 25 and over is downward, suggesting that many adults today are less drug experienced than their peers were in the past. Whilst this downward trend is also apparent in Australia for adults aged between 20 and 40, it is in ascent for adults aged 40 and over indicating that despite their lower rates of lifetime prevalence than younger adults, they are more drug experienced than adults in this age group were in the past. Furthermore, evidence from all the data sources demonstrates how short-term trends in recent use for any drug, and cannabis in particular, are rising in middle and older adulthood, at least from around age 30 in some of the countries, and, again, the long-term trends reveal how some of these age groups are recording higher prevalence rates now than their peers did in the past.

The concept of a cohort replacement effect is particularly useful for explaining our findings. With data like these, the goal for social researchers is to disentangle the effects of age, cohort and period upon behaviour.[xv] The notion of a cohort replacement effect to explain, at least in part, the current prevalence and trends we have described here has been given some weight by researchers (see Aldridge, 2008; Fahmy et al., 2012; Han et al., 2009; Johnston et al., 2013). This concept has been used to understand both increases and decreases in drug prevalence amongst specific age groups. A cohort replacement effect operates through the

movement of a comparatively drug experienced age cohort into older age groups and results in two outcomes: (1) an increase in prevalence within older age groups; and (2) a decrease in prevalence within younger age groups. The former is explained by a drug experienced generation taking their higher levels of drug use with them into older age or recommencing their drug use in later adulthood, and the latter by a less drug involved cohort moving into younger age groups.

As we have shown in relation to the data we have outlined above, many in middle and older adulthood have greater lifetime rates of drug use compared to their predecessors and, in America, their successors. For some older adults today, their drug experience may have been adolescent experimentation and never led to regular drug taking during the life course. For others, as the data on prevalence of recent drug use has demonstrated, they have brought their drug use with them into middle and older adulthood. Indeed, Johnston et al. (2013) argue that American adolescents of the early 1990s have taken their higher levels of drug use with them into adulthood. As they note: 'This pattern reflects a classic cohort effect, in which different age groups are not all moving in parallel; rather, different age groups show increases when the cohorts (i.e., high school classes) having heavier use at an earlier stage in development reach the relevant age level.' (2013: 132). The upward trends in recent drug use for some adults aged 30 and over, as well as the levelling of the prevalence of recent drug use amongst adults around the age of 40 and 50 can, therefore, be explained as a consequence of this type of phenomenon. In their analysis of American NSDUH data for the period 2002 to 2007,[xvi] Han et al. (2009) offer a similar explanation. They conclude that the upward trend in past year drug use for adults aged 50 to 59 is largely determined by the ageing of the baby boom population who were born during the period 1946 to 1964, particularly those born after 1950, and who had higher rates of drug use during adolescence and young adulthood than older cohorts.

We argue then, that some of the current prevalence rates and upward trends we have highlighted in this chapter can be understood as a product of specific drug experienced birth cohorts moving into older age groups. As we have noted, the concept of a cohort replacement effect is premised on the interaction between age and a time period. So what was so unique about the era in which these cohorts grew up and became drug experienced? The normalization thesis (Aldridge et al., 2011; Parker et al., 1998) helps us to appreciate this further. The concept was formulated to explain the unprecedented increases in the prevalence of recreational drug use amongst young people during the 1990s in the UK (Parker et al., 1998). Despite causing some controversy and dispute (see Shiner and Newburn, 1997, 1999), it has since been applied to a range of cultural settings (see, for example, Cheung and Cheung, 2006; Duff, 2003, 2005; Pearson, 2001; Measham et al., 2001; Pennay and Moore, 2010). This pioneering work, published in *Illegal Leisure*,[xvii] tracked a cohort of adolescents from the early 1990s into young adulthood and concluded that recreational drug use had undergone a process of normalization whereby it had become accommodated and accepted into the everyday lives of young people, an accommodation and acceptance that was even evident to an extent amongst drug abstainers. The adults who form part of this cohort replacement effect that we have described, which has resulted in levels of recreational drug use reaching historical highs for adults in their thirties, forties, and fifties, grew up during periods which fit with the notion of drug normalization, and, which in the countries we consider here, persisted for many years.[xviii] Hence, the comparatively high rates of lifetime prevalence of drug use amongst current older adults and lower rates in younger adults who have grown up in times when overall prevalence has generally been in decline in the three countries we have examined.

The concept of drug normalization also helps to explain the plateau effect we have identified in relation to older adult drug users in the US: it represents successive age cohorts who grew

up during times when drug use was relatively normalized. Furthermore, this idea also explains why prevalence of lifetime and recent drug use is highest in different older age groups across the countries we have examined. These variations in prevalence by age reflect the different periods in which recreational drug use was undergoing a process of normalization in these countries. To illustrate, during the 1990s, the *Illegal Leisure* generation had unparalleled levels of drug use and were the most drug involved cohort of the twentieth century in the UK. Now they are approaching their late thirties, it appears, as the data on recent drug use we have presented from the CSEW 2012/13 indicates, that some of them are taking their high levels of consumption with them into middle adulthood. In America, what has been described as a 'drug epidemic' (see Johnston et al., 2013) occurred earlier, from the late 1970s through to the early 1990s (see Han et al., 2009; Johnston et al., 2013), and in Australia, academics were identifying the process of drug normalization during the mid to late 1990s (see Duff, 2003; 2005). The cohort replacement effect, therefore, provides an explanation for variations in the prevalence and trends of recreational drug use amongst distinct age groups that we outlined earlier in this chapter. However, Han et al. (2009) and Johnston et al. (2013) note it is only a partial explanation. To further develop our analysis of the data in this chapter, we turn to consider social or environmental factors, which can help us to understand some of the changes in adult recreational drug use that occur across the life course.

The effect of the journey to adulthood upon recreational drug use

We have also highlighted how for some adults, the prevalence of recent drug use decreases as age increases. To explain this phenomenon, researchers have emphasized the impact of accomplishing the journey, or making the transition, from adolescence to adulthood (see Bachman et al., 1997; 2002; Hathaway, 2004; Shiner, 2009). This idea develops the notion of

'maturing out'; the process that underpins desistance from drug use (Winnick, 1962). From the transitions to adulthood perspective it is argued that adolescence is a period of life characterized by freedom from adult responsibilities which, in turn, facilitates drug taking. With the adoption of adult roles and responsibilities, for instance, gaining full-time employment, getting married, or becoming a parent, and the new identities they endow, values and social relationships they bring, drug desistance becomes more likely (Bachman et al., 1997; 2002; Shiner, 2009; Vervaeke and Korf, 2006). Shiner (2009) argues that recreational drug use begins to decline at precisely the point when adult roles start to bed in during the mid-twenties. In Williams and Parker (2001), the lead author of this chapter observed that the roles and responsibilities associated with adulthood are delayed, the road to adulthood is longer, and consequently, recreational drug use has extended further into adulthood than has traditionally been the case. Marriage and parenthood statistics from the three countries we examined are consistent with this idea. The marriage rate is in decline (ABS, 2013a; Cohn et al., 2011; ONS, 2014), for instance, in the UK the overall number of marriages has reduced by 30 per cent since the 1970s (ONS, 2014). Moreover, the age of first marriage has increased. Now, women are more likely to get married in their late, rather than early twenties, and men in their early thirties, rather than their early to mid-twenties (ABS, 2013a; Cohn et al. 2011; ONS, 2014). Likewise, the age of parenthood, at least for women, is also delayed with many first-time mothers now in their mid-twenties (Matthews and Hamilton, 2009), and there has been a substantial increase in the number of first-time mothers in their thirties and forties (ABS, 2013b; Livingston and Cohn, 2010; Matthews and Hamilton, 2009; ONS, 2013). The data we presented in Table 1 showed steep reductions in recent drug use around the late twenties and into the early thirties at the age when, for many, transitions to adulthood like these are now accomplished.

Whilst we do not, on the whole, disagree with the analysis of the relationship between transitions to adulthood and desistance from recreational drug use, we believe a more nuanced understanding that reveals how desistance can be a gradual process and, in some cases it may not always be guaranteed or permanent, is required. We have argued elsewhere (e.g. Aldridge et al., 2011; Williams, 2013) that the relationship between the journey to adulthood and drug journeys has been over-simplified and that the transition to adulthood does not always constrain drug journeys. Drawing on the work of Giordano et al. (2002), who offer an explanation for desistance from crime, adult transitions can be understood as 'hooks for change' which make change possible, but not certain. Collecting further data from the *Illegal Leisure* cohort when they were age 28, Williams (2013) found that many had achieved most of the transitions associated with adulthood *and* continued on their drug journeys, albeit at a slower pace. The nature of transitions are crucial here. For example, gaining full-time employment may not significantly curtail drug journeys and seems to depend on career evolution, in which greater responsibilities at work are associated with moderation in or desistance from drug taking. Williams, therefore, contends transitions within transitions occur which affect drug journeys. Furthermore, Williams argues permanent drug desistance may be associated with the simultaneous impact of a number of adult transitions. To illustrate, the drug journeys of female drug takers were: 'often constrained after the accomplishment of several adult transitions and by the full weight of responsibilities which accompany being a mother, maintaining a home and working full-time.' (Williams, 2013: 113; see also Measham et al., 2011). Continuing to take drugs in these circumstances, therefore, becomes more complicated and difficult. These ideas help to explain how recreational drug use may persist or desist, for some, in middle or older adulthood. Adult transitions may not always lead to drug desistance, rather a reduction in the frequency of drug taking may transpire, especially when the responsibilities associated with them are not too demanding. Desistance can,

therefore, be understood as a product of accomplishing a transition to adulthood which develops over time or the concurrent effect of multiple adult transitions, such that, in both circumstances, much greater demands are placed on adult lives. Again, it is in the thirties this is likely to occur for many, perhaps accounting for the further reductions in recent drug use during this time.

As we have already noted, some adults do not desist from recreational drug use and, as the data we have analysed in this chapter also demonstrates, it extends, albeit for a relatively few, into the thirties, forties, fifties and beyond. The emphasis placed upon desistance during early adulthood neglects to consider how drug use for some may evolve and persist across the whole life course. In our own work (e.g. Williams, 2013), we have highlighted the zigzagging nature of recreational drug journeys whereby drug use may temporarily cease, prompted, for example, by taking on a new adult role, such as parent, spouse or employee, and then, at another point in the future, continue. Becoming a parent, for instance, does not always lead to permanent desistance from drug use. Female interviewees discussed how they initially stopped taking drugs when they were new to motherhood, but once their children placed less demands on their time, and they had appropriate available social networks to help look after them, they recommenced their drug journeys (Williams, 2013; see also Measham et al., 2011). The literature on recreational drug use and the role of adult transitions is often premised on the journey to adulthood being straightforward and linear. Yet, we know living in contemporary society is fraught with risk (Beck, 1992; Giddens, 1991), such that life is characterized by setbacks and change. By way of illustration, intimate relationships end which leads to separation, a return to being single and possibly a change in living arrangements. As Williams (2013) has observed, events like these can instigate recommencement of drug journeys. Some of the increasing trends in recent recreational drug use in middle to older adulthood that we have identified may be, in addition to a cohort

replacement effect, explained by former drug users resuming their drug journeys after negotiating adult transitions or when their transitions have reversed. In addition, these increasing trends in recent drug use can be partly accounted for by the late onset of drug use in adulthood. Han et al. (2009), in their analysis of upward trends in recent drug use for American adults aged 50 to 59, correctly dismiss this idea providing evidence that only 3 per cent initiated drug use after age 50. However, their data also reveals that just over 10 per cent started taking drugs after age 30. Our own work (e.g. Askew, 2013), with a sample of adult drug users aged 30 to 59, has also found evidence to support this idea with drug journeys commencing in the twenties and thirties. Findings like this question assumptions that drug use in adulthood always originates as result of adolescent experimentation.

The persistence, and nature of adult recreational drug use

Explanations for the continuity of recreational drug use in adulthood focus on the absence of adult roles and responsibilities in some drug users lives. In this respect, persistence is associated with unemployment, not being married, and not being a parent (Bachman et al., 1997; 2002; Han et al., 2009; Shiner, 2009). Whilst this may account for some adult recreational drug users, others, as we have noted, continue on their drug journeys despite occupying adult roles. We now turn to consider how and why recreational drug use is accommodated in the lives of conventional adults, focusing on the function it plays and how it is controlled.

When explaining how decisions about recreational drugs are made, research (Aldridge et al., 2011; Coffield and Gofton, 1994; Parker et al., 1998; Williams, 2013) has drawn on a cost-benefit assessment in which the perceived costs are weighed up against the perceived benefits. If the benefits offset the costs, then recreational drug use is likely. Whilst decisions about drugs may not always be rational and can be based upon unbridled hedonism (see

Aldridge et al., 2011; Measham et al., 2001), in adulthood they become more about making strategic 'reasoned choices' (Williams and Parker, 2001). In this regard, Williams (2013) argues that when some of the benefits of recreational drug use, for example, feeling relaxed, lowering inhibitions or increasing energy, are considered in the context of adults' everyday lives, decisions to take drugs make more sense. The motives for recreational drug use then, are founded upon the functions drugs can provide, for instance time-out and stress-relief, to balance against the demands of adult lives (see also Osborne and Fogel, 2008). The survey data we presented earlier, demonstrated that cannabis is the most common drug consumed in adulthood, a drug that is perceived to relax users and, therefore, undoubtedly functions in this way for many adults after a challenging day or week at work or home. Similarly, cocaine or ecstasy, which may be consumed less frequently, is often perceived to provide both pleasure and an escape from the responsibilities of everyday life (Hinchliff, 2001; Williams, 2013). In the United States, the non-medical use of pharmaceuticals was the next most common category of drug consumed in adulthood after cannabis. Again, the effects of these drugs either as calming and anxiety reducing, pain relieving or stimulants no doubt operate in the context of stressful adult lives. In this respect, recreational drug use can be viewed as functional, it may help to improve or forget, even if temporarily, current situations or daily life, much like alcohol can. Elsewhere, we have observed how drug takers emphasize the functional nature of recreational drug use (Askew, 2013; Williams, 2013). In her discourse analysis of the ways in which recreational drug use is legitimized in adult lives, Askew (2013) interviewed 26 current drug takers aged between 30 and 59 whose drug repertoires included cannabis, cocaine and/or ecstasy. Participants described their drug use as a leisure activity which functioned to enhance an evening with friends or intimate partners or, cocaine consumption, for example, combatted tiredness and increased stamina during a social event.

Exploring the functions associated with recreational drug use, in the context of adult lives, helps to explain why, for some, it persists into middle and older adulthood.

The persistence of recreational drug use in adulthood is also assisted by the ways in which adults exert control over their consumption. During adulthood choices about which drugs to consume change, drug use becomes less frequent and the quantities per drug taking episode may be reduced (Aldridge et al., 2011; Askew, 2013; Duff et al., 2012; Hathaway, 2004; Parker et al., 2002; Williams, 2013). Drugs which are perceived to have some negative effects, for example the 'come down' after consuming ecstasy, may no longer be taken as frequently in adulthood and instead replaced by cocaine which is perceived to have less adverse after effects (Williams, 2013). Indeed, this may partly explain why cocaine is more popular than ecstasy amongst many adults in England and Wales. As Pearson (2001: 191) observed, in his ethnographic study of adult recreational drug use amongst 30 to 50 year olds, and in particular the consumption of cocaine, it was: 'used occasionally and regulated. This is perhaps what one might expect among people who have other valued life commitments such as family life and work, and who despite regular illicit drug consumption have reached maturity without encountering any major crises with their drug use.' Again, the significance of adult roles is highlighted here: recreational drug use is controlled by reference to other responsibilities at work or home (see also Decorte, 2001; Notley, 2005; Vervaeke and Korf, 2006; Williams, 2013; Zinberg, 1984). Moreover, Williams (2013) emphasized how drug journeys and life journeys intersect and influence decisions about which drugs to consume, how often and how much. It can be argued then, that recreational drug use in middle and older adulthood is controlled and functional. As such, it is interwoven and accommodated within, when appropriate, routine daily activities (see also Notley, 2005; Osborne and Fogel, 2008). This further highlights the ways in which recreational drug use, for many, continues to

be normalized in adulthood (see Aldridge et al., 2011; Measham et al., 2011). In this sense, as the data we analysed earlier in the chapter revealed, it may not be normalized with regard to prevalence rates, however, for those who do continue to take drugs in middle and older adulthood, it is normalized by virtue that it is accommodated alongside everyday life, but does not take precedence over it.

In this section of the chapter, we have offered some explanations for the prevalence and trends we outlined earlier. By no means are these exhaustive, however, together they provide insights into the current prevalence, patterns and trends in adult recreational drug use which we sketched out previously. The cohort replacement effect helps us to appreciate why rates of recent drug use have increased and, in some cases plateaued, for middle and older adults in the countries we have examined. They are a result of experienced drug cohorts, who grew up during periods of drug normalization, moving into older age groups. We have also outlined how and why recent drug use decreases with age with reference to the journey to adulthood. In this regard, we argue a more refined understanding of drug desistance is required which can appreciate the nature of different adult transitions and account for the gradual slowing down and the fluctuating quality of drug journeys across the life course. Although, for many, drug use does eventually permanently cease with age, there are a minority who continue to take drugs in middle and older adulthood. The persistence of recreational drug use in this respect can be understood as a consequence of the nature of it: for many it is functional and controlled, and does not take priority over other responsibilities.

Innovations in research and drug policy: broadening our understanding of adult recreational drug use in the new millennium

We now highlight some important research and policy implications arising from what has been discussed so far. In respect of research implications, we identify key issues which should form future research agendas and make some recommendations in relation to accessing adult populations and research design. Our discussion of policy implications focuses on the nature of current policies and what should be developed and focused on in the future.

Research dilemmas: themes, access and research design

A considerable portion of research on recreational drug use focuses on young people and perpetuates the idea of recreational drug use as a young person's activity. Our findings challenge this notion and indicate there are a range of topics which require further research with participants in middle or older adulthood, using qualitative or mixed methods strategies. They are in relation to the nature, context and motivations for: the non-medical use of pharmaceuticals in America; cannabis, cocaine or ecstasy consumption; poly-drug use; and drug initiation. Current research on adult recreational drug use tends to access samples, with the exception of large scale nationally representative surveys, from early adulthood or the beginning of middle adulthood, the typical age at which drug use begins to decline. Even though a broad age range may have been selected which includes much older adults, the mean age is typically around 30 (see Hathaway, 1997; 2004; Duff et al., 2012; Notley, 2005; Osborne and Fogel, 2008; Shukla, 2006). The data we have analysed reveals how current age cohorts in their thirties, forties and fifties, who grew up during a time of drug normalization are taking their drug use with them into middle and older adulthood. Researchers should focus their efforts upon understanding the nature of their recreational drug use and the benefits and problems associated with it.

A lack of research with middle and older adults is connected to difficulties in accessing these samples who may be unwilling to participate because they are concerned about the ramifications of discussing their drug use, especially when they have positions of responsibility at work, or as parents, or even grandparents, in the domestic sphere. Often adult drug users are recruited in relatively accessible venues, for instance, drug services or nightclubs, however, they do not represent most recreational drug users in middle or older adulthood. Typically, snowball sampling is used to recruit participants from hard to reach populations, yet it can create a biased sample. To counter this problem, in our own research (e.g. Askew, 2013), snowball sampling was combined with theoretical sampling to produce a varied sample of drug users aged between 30 and 59. Others have suggested developing snowball sampling through the method of respondent driven sampling (Heckathorn, 1997; Johnston and Sabin, 2002). Although similar to snowball sampling, through peer recruitment and the offer of incentives to participants, it can also access a more varied sample (Johnston and Sabin, 2002). With the advent of virtual technologies and the development of virtual methodologies, social media, like *facebook*[xix] or drug forums, such as *Blue Light*, can be useful to locate hard to reach populations, especially under-researched groups, although problems with bias may still remain (see Miller and Sonderland, 2010). Clearly, recruiting middle and older adult recreational drug users poses a challenge. Researchers, therefore, need to develop innovative ways, using some of the ideas outlined here, to access adult recreational drug users who fit general population norms and do not appear in easily accessible venues like drug treatment services or nightclubs. When they do find them, they should be recruited with tact, and reassured about confidentiality and anonymity.

Three of the surveys we have analysed are cross-sectional trend studies: the CSEW, the Australian NDSHS and the American NSDUH. This type of research design is effective at identifying changes in overall populations, but cannot tell us about changes at an individual

level. As we have noted, some of the increasing trends in recent drug use can be explained by the zigzagging nature of drug journeys, whereby drug users temporarily desist and begin their journey again, at a later stage of their life. Appreciating how drug use evolves across the whole life course is essential and longitudinal panel studies, like the MTF and *Illegal Leisure* projects, are fundamental in this regard. Moreover, a mixed methods approach can provide a more comprehensive account collecting data on both the extent and meaning of recreational drug use. Research funding should be allocated for the continuation of studies like these, as well as for the development of future longitudinal research beginning at various stages of the life course.

Drug policy dilemmas: how to tackle adult recreational drug use

In general, international drug policies are focused upon prevention and enforcement. However, in both cases, these efforts are usually directed at young people. Evidence from the US, for instance, reveals how drug possession/use arrest rates peaked at age 18 in 2010, and middle and older adults were far less likely to be arrested (Snyder, 2012). Furthermore, Reuter and Stevens (2007) argue that only a small proportion of drug users are detected or subject to sanctions. In relation to adult recreational drug users, especially those with many years of experience, Pearson (2001: 195) asserts: 'It is difficult to conceive of an enforcement response to this kind of drug use and this kind of drug user, because they have successfully negotiated their way around enforcement measures for 30 years in some cases.' As we have outlined in this chapter, most recreational drug use in adulthood is functional and controlled, and, therefore, does not cause significant problems for drug takers. Pearson (2001) argues their stake in society, as employees or parents, often keeps their drug use in check.Generally, as the data we have examined demonstrates, recreational drug use in adulthood involves the consumption of low risk drugs, like cannabis, and more harmful drugs are taken less

frequently (see Nutt, 2009). Moreover, recreational drug takers can be described as 'risk managers' who are mindful of the pleasures associated with their drugs consumption, as well as the risks, which they often perceive as acceptable or manageable (Williams, 2013). This notion of functional, pleasurable, low risk recreational drug use is absent in many policy debates (Askew, 2013; Williams, 2013).[xx] Acknowledging its existence can have numerous benefits, not least in reducing the stigma attached to drug use, and, in turn, making it more likely that adult recreational drug users will seek help and support if they need it in the future (Global Drug Survey, 2014). The policy response to adult recreational drug use does not, therefore, require enforcement nor will prevention methods be effective. To introduce more methods of controlling adult recreational drug use, for example, drug testing in the workplace, is counter-productive. As Perrone et al (2013) found, drug testing for cannabis can lead users to switch to legal highs, like synthetic cannabinoids, which are undetectable, but we know little about in terms of harm. We argue that international drug policies need to develop, or continue to develop, responses based upon harm reduction and public health models, and respecting the human rights of recreational drug takers.

Although the proportion of recreational drug users in middle and older adulthood is relatively small, the evidence from the countries we have examined, indicate they are growing. It is likely that some of this ageing population of drug users will experience problems in the future and require help or treatment from public health services. Han et al. (2009) predict that there will be an increase in the amount of adults aged 50 and over presenting with a past year substance use disorder, such that it is estimated there may be 5.7 million in America by 2020. Health services will need to prepare for this potential increase in and previously unforeseen demand by developing screening, harm reduction strategies and primary care services for adult recreational drug users. Furthermore, our findings provide fuel for debates about drugs as a human right. We recognise there are competing human rights, however, given recent

calls for new drug regulatory systems (see Seddon, 2014; Transform, 2009), the decriminalisation of some drugs in many countries across the world, and the legalisation of cannabis for recreational purposes in four states of America, the time is ripe to capitalise on these new developments. The surveys we examined revealed a substantial minority who are taking drugs in middle and older adulthood. As we noted earlier, drug use in this respect is likely to be more strategic, functional and a reasoned choice. Moreover, as van Ree (1999) asserts, drugs are often enriching to individual lives. It, therefore, seems unreasonable to us to ignore or violate the following principle: 'people should be entitled to determine what they ingest, even if it does them harm' (Hunt, 2005: 5). Respecting this tenet will require the removal of drug prohibition and incorporating the core principles of human rights into drug policies (see Barrett, 2010). In turn, this is likely to improve the health, well-being and daily lives of adult recreational drug users.

Concluding thoughts

Frequently, when overall prevalence of drug use is in decline, governments claim success in the *War on Drugs*. However, as we have revealed, this masks what is occurring across different age groups. Whilst drug use may be decreasing for younger age cohorts who form the bulk of recreational drug users, recent use is on the increase in middle and older adulthood. It is, therefore, no longer the case, in the countries we have examined, that we can define recreational drug use as a youthful activity. It now extends into adulthood at higher rates than it has done in the past, and in some cases, prevalence of recent drug use for individual drugs is greater than when drug use had previously peaked. Although recent consumption of drugs does, on the whole, decline with age, in America there is evidence that drug use can plateau in middle and older adulthood and may, for some, become firmly established at this stage of the life course. It is worth noting, that America experienced its

‘drug epidemic’ earlier than when the process of normalization of recreational drug use began in the UK (see Parker et al., 1998), and Australia (see Duff, 2003; 2005). Therefore, as the adolescents of the 1990s from these countries move towards the end of middle adulthood and into older adulthood, we may also see the plateauing of recent drug use occur. Whilst most recreational drug use is not harmful nor does it take priority over daily life, there may be problems for adults who have extensive, long-term, regular recreational drug careers which began when they were teenagers. Governments must consider appropriate public health responses for their ageing recreational drug using populations. Moreover, international policies need to be developed to respect the rights of drug users.

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[i] Formerly the British Crime Survey.

[ii] We use this study mainly to supplement the findings of the NSDUH or as an alternative. For example, the NSDUH does not report data on annual prevalence of drug use. When making comparisons in relation to past year prevalence across the three countries we present data from the MTF study.

[iii] All of the sources collect data about legal, illegal and the non-medical use of some pharmaceuticals.

[iv] The age range varies for each of the household surveys. The CSEW has an upper age limit of 59, whilst the NSDUH and NDSHS do not have an upper age limit. The MTF is a panel study and so far has followed it's cohort through to age 50.

[v] The analyses presented here can be extended further to include other countries, particularly those which have implemented decriminalisation policies, like Holland, Portugal and Spain.

[vi] It should be noted that these data measure recreational and non-recreational drugs, such as crack cocaine and heroin. Surveys like these, however, which sample household or student populations are less likely to capture

non-recreational drug use and therefore, the data discussed here is likely to comprise mainly of recreational drugs. Later in the chapter, we present analyses of the most popular recreational drugs across the three countries.

[vii] For information, the available published data from the CSEW indicates that 35.9% of 16-59 year olds had tried a drug at least once in their lifetime (Home Office, 2013).

[viii] To address inconsistency in self-reports across the study, Johnston et al. (2013) provide two results for lifetime prevalence of drug use. Here, we use the unadjusted percentages which are lower than the adjusted figures.

[ix] Current or recent drug use is considered to provide a proxy measure for more regular drug taking. However, it is possible that it may pick up some chaotic drug taking, though this is likely to be minimal.

[x] The data presented in Table 1 from the 2012 NSDUH report mainly analyses recent drug use data by past month rather than past year. Whilst it is not directly comparable with the other data sources, the aim again is to paint a picture of the trend by age in recent drug use rather than compare prevalence rates across the selected countries.

[xi] It is not possible to provide a comparable analysis from the 2012 MTF survey because data has only been collected from 50 year olds since 2008 which so far indicates a small overall reduction in past year prevalence for any drug by 0.6%.

[xii] Detailed data in respect of comparable age groups and individual drugs was not available from the American 2012 NSDUH report. Nevertheless, it identifies cannabis, the non-medical use of pharmaceuticals and cocaine as the most common drugs consumed in adulthood, as does the 2012 MTF study.

[xiii] Patterns of drug use often change across the life course. In the UK, for example, we know during adolescence, that the most common drugs consumed may be quite different to those in adulthood. Whilst cannabis predominates across adolescence and adulthood, hallucinogens or amphetamines may also be more common in adolescence, and cocaine typically replaces these drugs in adulthood (see Aldridge et al., 2011).

[xiv] Drugs data was first collected as part of the CSEW in 1996.

[xv] Age effects can be seen as a result of the ageing process, whereas a period effect is the product of living during a certain time or through an event, for example, *9-11*, which affects everyone regardless of age. A cohort effect arises through a reciprocal relationship between age and period; the result of being born and/or socialized during a specific time period (see Glenn, 1976; Bell and Jones, 2013).

[xvi] NSDUH data up to 2012, as we have found, indicates the overall trend in recent drug use for adults aged 50-59 is rising which suggests subsequent age cohorts are even more drug experienced.

[xvii] Lisa Williams has been involved in the panel study since 1999. So far, it has followed participants until age 28. The results have been published in the following monographs: *Illegal Leisure* (Parker et al., 1998), *Illegal Leisure Revisited* (Aldridge et al., 2011) and *Changing Lives, Changing Drug Journeys* (2013), and numerous journals.

[xviii] We note, however, it can be argued that drug normalization has prevailed in many Western societies, despite overall drug prevalence reducing in recent years.

[xix] Although *facebook* has initially been popular with young people, in 2010 the fastest growing group of users were aged 34 and over (Fletcher, 2010).

[xx] Even when the growing population of older adult drug users are acknowledged, it is in relation to the dependent use of drugs like heroin, and how treatment services should respond to this problem (see EMCDDA, 2010).